## **INTRODUCTION:**

In accordance with the foregoing, Claim 47 is objected to and claims 4-10 and 15-46 stand rejected.

Claims 4-10 and 15-47 are pending and under consideration.

## **REJECTION UNDER 35 U.S.C. § 103:**

In the Office Action, at page 3, claims 4-5, 7-10, 15-24, 26-27, 30-32, 40-43, and 45 were rejected under 35 U.S.C. § 102 in view of EP 0 833 337 A2 to Aramaki et al. ("<u>Aramaki</u>") and in view of U.S. Patent No. 5,404,520 to Sonobe ("<u>Sonobe</u>"). This rejection is traversed and reconsideration is requested.

Aramaki fails to teach or suggest, "a last address of the manufacturer information for the recording and/or reproducing apparatus to identify the last address of the manufacturer information," as recited in independent claim 4. Rather, <u>Aramaki</u> limits its description to designating a start point and an end point of the section to be deleted and linking the programs preceding and proceeding the erased portion. The cited reference fails to teach or suggest all the claimed features recited in independent claim 4.

Further, <u>Aramaki</u> generally describes that a recording time of programs is recorded using 6 bytes, where two bytes are taken for the manufacturers code and a model code showing the manufacturer of the recording apparatus used for recording the program.

Furthermore, the Office Action correctly recognized that <u>Aramaki</u> fails to teach or suggest, "a last address of the manufacturer information for the recording and/or reproducing apparatus to identify the last address of the manufacturer information," as recited in independent claim 4. Accordingly, the Office Action relies on <u>Sonobe</u> as providing for such recitations.

Sonobe generally describes a close process unit 18, which receives CLOSE instruction, writes a code representing a data end (called end of file or EOF) in file 12 and also writes the file name and storing address of file 12 in magnetic disc apparatus 11 in file name storing unit 14 as a form of file control block 21 so that other programs can read them. Emphasis added.

See column 2, lines 7-28. Further, after a writing program 64 issues a CLOSE command for a READ command issued by reading program 65, the data end (EOF) is notified. See column 10, lines 33-38. However, it appears that the Office Action is construing the terms "EOF" and "address" to be the same, which is improper as understood by a person of ordinary skill in the pertinent art.

For instance, according to Newton's Telecom Dictionary, 2002, page 36, a copy of which is enclosed herewith, an "Address" is defined by comprising "characters identifying the recipient or originator of transmitted data...In computer terms, an address is a set of numbers that uniquely identifies the physical or logical location of something." Accordingly, "a last address of manufacturer information for the recording apparatus," as recited in independent claim 11 would be the last characters pertaining to, identifying, or showing the location of the manufacturer information for the recording apparatus. In contrast, an "EOF" as described in Sonobe is defined in Newton's Telecom Dictionary, 2002, page 271, as "an abbreviation for End of File.

MS-DOS files and some programs often mark the end of their files with a Ctrl Z – or ASCII 26."

Thus, an "EOF" is a conventional mark indicative of an end of a file, such as a Null or a Stop. The "EOF" can be anywhere in a program and be and mean the same thing. In contrast, the address of independent claim 4 cannot be anywhere. Rather, it is the "last address" of the "manufacturer information for the recording and/or reproducing apparatus to identify the last address of the manufacturer information."

Accordingly, because neither <u>Aramaki</u> nor <u>Sonobe</u>, individually or combined, teach or suggest, "a last address of the manufacturer information for the recording and/or reproducing apparatus to identify the last address of the manufacturer information," as recited in independent claim 4, it is respectfully requested that independent claim 4 and related dependent claims be allowed.

Furthermore, the Office Action refers to similar portions of the cited references to reject independent claims 7, 8, 10, and 31 as the portions of the cited references previously discussed and distinguished from the claimed features of independent claim 4. The arguments presented above supporting the patentability of independent claim 4 in view of <u>Aramaki</u> and <u>Sonobe</u> are incorporated herein to support the patentability of independent claims 7, 8, 10, and 31.

Accordingly, <u>Aramaki</u> and <u>Sonobe</u> fail to teach or suggest all the claimed features of independent claims 4, 7, 8, 10, and 31. It is respectfully requested that independent claims 4, 7, 8, 10, and 31 and related dependent claims be allowed.

In the Office Action, at page 12, claims 6 and 25 were rejected under 35 U.S.C. § 103 in view of <u>Aramaki</u>, <u>Sonobe</u>, and in view of U.S. Patent No. 5,758,355 to Buchanan ("<u>Buchanan</u>"). This rejection is traversed and reconsideration is requested.

Because claims 6 and 25 depend from independent claims 4 and 7, respectively, the cited references, individually or combined, must teach or suggest all the claimed features

recited in independent claims 4 and 7. The arguments presented above supporting the patentability of independent claims 4 and 7 in view of <u>Aramaki</u> and <u>Sonobe</u> are incorporated herein.

According to <u>Buchanan</u>, company records, for example, may indicate not only which companies are associated with a particular team, but also may identify records in a contact table that specify the contact persons at the company. <u>See</u> column 2, lines 33-37. A Contact Table of <u>Buchanan</u> includes contact id., first name, last name, company id., row id., modify date, and modify employee. <u>See</u> column 8, lines 40-50.

However, similarly to <u>Aramaki</u> and <u>Sonobe</u>, <u>Buchanan</u> is silent as to teaching or suggesting, "a last address of the manufacturer information for the recording and/or reproducing apparatus to identify the last address of the manufacturer information," as recited in independent claim 4. Rather, the Contact Table appears to merely list employees of different companies modifying a company's records and addresses for the contact, but nothing more. There is no teaching or suggestion in <u>Buchanan</u> that the Contact Table stores "a last address of the manufacturer information for the recording and/or reproducing apparatus to identify the last address of the manufacturer information," as recited in independent claim 4. The identification information includes employees modifying records that are related to a team for which an associated remote employee is included. <u>See</u> column 7, lines 47-52.

Furthermore, the Office Action refers to similar portions of the cited references to reject independent claim 7 as the portions of the cited references previously discussed and distinguished from the claimed features of independent claim 4. The arguments presented above supporting the patentability of independent claim 4 in view of <u>Aramaki</u>, <u>Sonobe</u>, and <u>Buchanan</u> are incorporated herein to support the patentability of independent claim 7.

In view of the foregoing, it is respectfully requested that independent claims 4 and 7 and related dependent claims be allowed.

In the Office Action, at page 13, claims 28-29, 33-39, 44, and 46 were rejected under 35 U.S.C. § 103 in view of <u>Aramaki</u>, <u>Sonobe</u>, and in view of U.S. Patent No. 6,038,366 to Ohno et al. ("Ohno"). This rejection is traversed and reconsideration is requested.

Because claims 46 and claims 33-39 depend from independent claims 4 and 31, respectively, the cited references, individually or combined, must teach or suggest all the claimed features recited in independent claims 4 and 31. The arguments presented above supporting the patentability of independent claims 4 and 31 in view of <u>Aramaki</u> and <u>Sonobe</u> are

incorporated herein.

Independent claim 28 recites, "wherein the manufacturer information comprises a last address of the manufacturer information for the recording and/or reproducing apparatus to identify the last address of the manufacturer information." The Office Action refers to similar portions of <u>Aramaki</u> and <u>Sonobe</u> to reject independent claim 28 as the portions of the cited references previously discussed and distinguished from the claimed features of independent claim 4. The arguments presented above supporting the patentability of independent claim 4 in view of <u>Aramaki</u> and <u>Sonobe</u> are incorporated herein to support the patentability of independent claim 28.

Similarly to <u>Aramaki</u> and <u>Sonobe</u>, <u>Ohno</u> fails to teach or suggest the recitations comprising the manufacturer information. Specifically, <u>Ohno</u> describes in FIG. 5 and corresponding description <u>an empty list pointer</u> indicating an address where the data are to be stored in the library memory 4 upon recording of a new program and <u>a pointer</u> indicating an address of a program list, but does not teach or suggest fails to teach or suggest, "a **last address of the manufacturer information** for the recording and/or reproducing apparatus to identify the last address of the manufacturer information," as recited in independent claims 4 and 28, and "a **last address of the manufacturer information** for the reproducing apparatus to identify the last address of the manufacturer information," emphasis added, as recited in independent claim 31.

Column 6 of Ohno, lines 18-31, describes a control procedure where a preliminary play-back operation is carried out to read out tape map information recorded in a video signal. Specifically, the control procedure checks whether the VTR manufacture number data as fetched from the tape coincides with the VTR manufacture number stored in the library memory 4 shown in FIG. 1. Unless coincidence is found, this control processing is terminated. Thus, rather than teaching or suggesting that the apparatus records or modifies "manufacturer information to support a manufacturer's specific function, wherein the manufacturer information comprises an identification information of the manufacturer of a recording apparatus that recorded or modified the content of the recording medium different from the identification information prior to the recording or the modification," emphasis added, as recited in independent claim 4, in Ohno, unless coincidence is found, a control processing is terminated by regarding the tape as loaded is not the one of concern. Emphasis added.

The Office Action refers to similar portions of <u>Ohno</u> to reject independent claims 28 and 31 as the portions of the cited references previously discussed and distinguished from the claimed features of independent claim 4. The arguments presented above supporting the

Serial No. 09/610,380

patentability of independent claim 4 in view of Ohno are incorporated herein to support the patentability of independent claims 28 and 31.

Accordingly, Aramaki, Sonobe, and Ohno, individually or combined, fail to teach or

suggest all the claimed features of independent claims 4, 28, and 31 and related dependent

claims. It is respectfully asserted that independent claims 4, 28, and 31 and related dependent

claims are allowable in view of the prior art of record.

Such combination fails to teach or suggest all the claimed features of independent

claims 4, 28, and 31. It is respectfully requested that independent claims 4, 28, and 31 and

related dependent claims be allowed.

**CONCLUSION:** 

In accordance with the foregoing, it is respectfully submitted that all outstanding

objections and rejections have been overcome and/or rendered moot, and further, that all

pending claims patentably distinguish over the prior art. There being no further outstanding

objections or rejections, the application is submitted as being in condition for allowance, which

action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that

prosecution can be expedited by the Examiner's contacting the undersigned attorney for a

telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this

Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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15

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# Add-On Conference — Intercom Only / Addressability

or internal call on Hold, and obtains system dial tone. The user can then call another internal extension or an outside party. After speaking with the "consulted" party, the original ing phone reactivates the initiating command (typically a button push) and creates a threeparty conference with the call previously placed on Hold.

Add-on Conference — Intercom Only Allows a telephone user to add someone else to an existing intercom (within-the-same office) conversation.

Add-on Data Module Plug-in circuit cards which allow a PBX to send and receive analog (voice) and digital (data) signals.

Added Bit A bit delivered to the intended destination user in addition to intended user information bits and delivered overhead bits. An added bit might be used to round out the number of bits to some error checking scheme, for example.

Added Block Any block, or other delimited bit group, delivered to the intended destination user in addition to intended user information bits and delivered overhead bits. See also Extra Block.

Additional Call Offering See ACO.

Additional Cooperative Acceptance Testing See ACAT.

Additional Period Billing periods charged after initial, first or minimum period on a call. Usually, long distance toll/DDD has a one-minute initial period at premium rate; subsequent "additional" minutes (period) are billed at a lower rate. Additional period billing increments vary by long distance company.

Additive Primaries By definition, three primary colors result when light is viewed directly as opposed to being reflected; red, green and blue (RGB). According to the tri-stimulus theory of color perception, all other colors can be adequately approximated by blending some mixture of these three lights together. This theory is harnessed in color television and video communications. It doesn't work so well in color printing where special colors are often printed separately.

Additive White Gaussian Noise AWGN. See White Noise.

ADDMD Administrative Directory Management Domain. A X.500 directory management domain run by a PTT (Posts, Telegraph, and Telephone administration) or other public net-

Address An address comprises the characters identifying the recipient or originator of transmitted data. An address is the destination of a message sent through a communications system. A street address (i.e. 123 Elm Street, Normal, OK) is your physical address. A telephone number is considered the address of the called person. In computer terms, an address is a set of numbers that uniquely identifies the physical or logical location of some thing — a workstation on a LAN, a location in computer memory, a packet of data trav eling through a network. On the Internet, addresses are based on the IP protocol, which uses a 32-bit code in the IP header to identify host addresses. Web URLs and e-mail addresses are arbitrary text addresses that correlate to IP addresses. They are maintained in directory service databases. For a longer explanation, see Internet Address.

Address Complete Message ACM. A CCS/SS7 signaling message that contains call-status information. This message is sent prior to the called customer going off-

Address Field in data transmission, the sequence of bits immediately following the opening flag of a frame identifying the secondary station sending, or designated to receive,

Address Field Extension EA. A Frame Relay term defining a 2-bit field in the Address Field, identifying the fact that the address structure is extended beyond the 2-octet default. Frame Relay standards provide for extension of the address field up to 60 bits, which extension will be implemented as the popularity of Frame Relay grows, placing pressure on the standard addressing convention.

Address Filtering A way of deciding which data packets are allowed through a device. The decision is based on the source and destination MAC (Media Access Control, the lower part of ISO layer two) addresses of the data packet.

Address Mapping Technique that allows different protocols to interoperate by translating addresses from one format to another. For example, when routing IP over X.25, the IP addresses must be mapped to the X.25 addresses so that the IP packets can be transmitted by the X.25 network. See also address resolution.

Address Mask An electronic messaging term. A bit mask used to select bits from a network address (e.g. Internet) for sub-net addressing. The mask is 32 bits long and selects the network portion of the address and one or more bits of the local portion. Sometimes called sub-net mask.

Address Message A message sent in the forward direction that contains address

information, the signaling information required to route and connect a call to the called line, service-class information, information relating to user and network facilities and call-originator identity or call-receiver identity.

Address Message Sequencing In common-channel signaling, address message sequencing is a procedure for ensuring that address messages are processed in the correct order when the order in which they are received is incorrect.

Address Munging Modifying one's e-mail address in such a way that computers can't read it but humans can.

Address Prefix An ATM term. A string of 0 or more bits up to a maximum of 152 bits that is the lead portion of one or more ATM addresses.

Address Records See A Records.

Address Resolution The process of discovering a device's address. 1. An internetworking term. A discovery process used when, as in LAN protocols such as TCP/IP and IBM NetBIOS, only the Network Layer address is known and the MAC address is needed to enable delivery to the correct device. The originating end station sends broadcast packets with the device's NLA to all nodes on the LAN; the end station with the specified NLA address responds with a unicast packet, addressed to the originating end station, and containing the MAC address. See Address Resolution Protocol.

2. An ATM term. Address Resolution is the procedure by which a client associates a LAN destination with the ATM address of another client or the bus.

Address Resolution Protocol ARP. The internet protocol used to map dynamic Internet addresses to physical (hardware) addresses on local area networks. Limited to networks that support hardware broadcasts.

Address Screening A service provided by Switched Multi-megabit Data Service (SMDS). Address Screening allows the network to compare the Source Address of the transmitting party to a list of addresses for including (or excluding) end-points into (or out of) a virtual network.

Address Separator A character that separates the different addresses in a selection signal.

Address Signating Signals either the end user's telephone or the central office switching equipment that a call is coming in.

Address Signals Address signals provide information concerning the desired desfr nation of the call. This is usually the dialed digits of the called telephone number or access codes. Typical types of address signals are DP (Dial Pulse), DTMF, and MF.

Address Space The amount of memory a PC can use directly is called its address space. MS-DOS can directly access 1024K of memory (one megabyte). A protected mode control program like Microsoft Windows 3.x or OS/2 can directly address up to 16 megabytes of memory. Here is a definition of address space, as supplied by the Personal Computer Memory Card International Association (PCMCIA) as address space applies to PCMCIA cards: "An address space is a collection of registers and storage locations contained on a PC Card which are distinguished from each other by the value of the Address lines applied to the Card. There are three, separate, address spaces possible for a card. These are the Common Memory space, the Attribute Memory space and the 1/0 space.

Address Table A table stored in routers, bridges and switches that enables these devices to know where on the network to forward information.

Addressable The characteristic of a network device enabling it to send and receive messages independently due to its unique identification code.

Addressable Programming A cable TV (CATV) industry term. A subscribe orders a movie or sports event. He does that calling a phone number (generally an 800 number). A computer answers, grabs the calling number, confirms the request, then hangs up. The computer passes the request onto the cable company's computer, which checks the calling phone number against its accounting records. If the subscriber has good credit, the cable company sends a coded message down its cable network to the caller's set-top cable box/converter. The message temporarily enables that particular converter to descramble the channel offering the desired program.

Addressability 1. In computer graphics, the number of addressable points on a deplay surface or in storage.

2. In micrographics, the number of addressable points, within a specified film frame, with ten as follows: the number of addressable horizontal points by the number of addressable vertical points, for example, 3000 by 4000.

3. A cable TV term. The capability of controlling the operation of cable subscriber setton converters by sending commands from a central computer. Such addressability is absolute ly required for a cable system to offer pay-per-view services.

Addressable Point h addressed. See Addressability. Addressee The intended r Addressing Refers to the cific piece of information or sol has an address.

ADF Automotic Document Fee ADH 1. Average Delay to Ha waits before being connected to 2. Automatic Data Handling.

Adherence A term used in ing in the center are doing who break? Are they answering the uled by workforce manageme ence." If not, they're "out of a Adherence Monitori coming out of an ACD with for force employment levels. The working as forecast. This a me how well it works since it's y Adherence.

Adjacency Relationship f for the purpose of exchanging common medio segment.

Adjacent Cell A cellul Mobile End System (M-ES) to the other.

Adjacent Channel placed too close together in mess up each other's convers **Adjacent Colocatio** 

Adjacent MD-IS Acel ISs) are adjacent if each MD Adjacent MTA An MT. MTA. A Message Transfer / Telegraph, and Telephone ac Adjacent Nodes I. I

vening nodes. 2. in DECnet and OSI, node or Token Ring networks).

Adjacent Signaling interconnected by signaling i Adjunct 1. Network syst that contains SLEE (Service nicates with an Advanced II AlN Release 1 calls. See als 2. An auxiliary device conne or an analog interface.

Adjunct Key Syste system provides the users v mon term today.

Adjunct Processo "talks" to the switch and g a database of customers a customer lives in Indiana, ogents handling Indiana cu gy monogement, building : 2. An AIN (Advanced Inte Point). An Adjunct Processi (Service Switching Points) multiple SSPs are supports Processors can include rout to comy a significant ber of bytes

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ne, for signals of rel slower than other n at different time of delay at 1700 fc

ion that results it of interest is not con-ays of the two fields

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nd of a block of data purposes of network s embedded in a com? ses, ensuring that in ntrusive basis. In other cuit will not intrude of Bonds. For example, ISDN BRI (Basic Rate Interface) provides for two B (Bearer) The latter D channel always is available and a page 1144 The 16 Kaps D channel always is available, on a priority basis, for network man-(i.e., signaling and control) purposes, and without affecting the circuit's ability to the end user's applications running over the two B channels. See also BRI.

End Of Day, a favorite Microsoft expression.

FOE See Electronic Order Exchange. The abbreviation for End Of File. MS-DOS files and some programs often mark the

and of their files with a Ctil Z — or ASCII 26. End of Message (indicator). In ATM network, EOM is an indicator used in the AAL dentifies the last ATM cell containing information from a data packet that has been Tope End of Procedure frame. A frame indicating that the sender wants to end the call.

**BOT** End of Transmission, End of Tape. **LOTC** European Organization for Testing and Certification.

**EOW** Engineered OrderWire. EPA Energy Star Monitors that comply with this standard consume less electicky by powering down when not in use.

EPABX Electronic Private Automatic Branch eXchange. A fancy name for a modern PSX Other fancy names include CBX, Computerized Branch Exchange.

EPD Early Packet Discard. A technique used in ATM networks for congestion control in Support of both Classical IP over ATM and Local Area Network Emulation (LANE). Such data is transmitted in the form of packets and frames, respectively, each of which typically is a subset of a much larger set of data such as a file. In the case of Classical IP over ATM, each data packet can be variable in size, up to a maximum of 65,536 actets (e.g., bytes). As the IP data packet enters the ATM switch on the ingress side of the ATM network, it is stored in a buffer until such time as the ATM switch can segment it into cells, each with a payload of 48 actets — there can be a great many such cells for each packet — and act to set up a path and circuit to forward the stream of cells which comprise the original packet. If a given cell is dropped for some reason (e.g., there is not enough buffer space at either the incoming in the outgoing buffer within the switch, the integrity of the original packet is lost through this phenamenon known as "packet shredding." Early implementations of Classical IP over Missingly forwarded the remainder of the cells associated with that packet. So, some cells made it to the ATM switch at the egress edge of the network, and some cells didn't. When the cells were reassembled into the packet as they exited the ATM network, the result was an incomplete pocket. The higher layer protocols then requested a retransmission of the entine packet. If the ATM network was highly congested, this occurrence was repeated many times, thereby contributing to further congestion. Partial Packet Discard (PPD) involves numbeing each cell associated with a segmented packet as it enters the ATM domain through the inbound buffer of the ingress switch. If any cell is dropped, the entire stream of cells associated with the packet is dropped. PPP enhances the performance of the ATM network by dropping those cells, which serve no purpose as the entire packet will be transmitted in either case. PPP is an earlier, and less sophisticated, technique that largely has been replaced by Early Packet Discard (EPD), which acts to discard the entire cell stream associated with that packet if there is not enough buffer space at either the incoming or the outgoing buffer within the switch, with that determination being a function of a programmable threshold. Discarded packets are detected as missing by the higher layer protocols, and retransmissions are requested. See also ATM, Classical IP over ATM, LANE, and PPD.

Ephemeris The predictions of current satellite position that are transmitted to the user in the data message of a GPS (Global Positioning System) satellite message.

Epitaxy Actually, it's molecular beam epitaxy. A fabrication process for growing silicon waters of exceptional quality. The process involves heating an element, or compound, in an effusion oven to a temperature sufficient to release some of the atoms. (It's not as extreme as vaporization, but the idea is much the same.) Some of the atoms, or molecules, are drawn in a linear beam into an intense vacuum chamber, where they are deposited on a substrate (i.e., foundation) silicon water, one atomic, or molecular, layer at a time. The yield is a water comprising films that can be measured in atomic, or molecular, levels of thickness, with each film being identical in structure to the substrate water. Molecular beam epitaxy was perfect ed by A.Y. Cho of Bell Telephone Laboratories. The fabrication process was invented in 1960 by Messrs. Kleimack, Load, Ross, and Theuerer of Bell Labs as the demand developed for layered semiconductors and semi-insulators of precise film thicknesses. Epitaxy has made possible the manufacture of high-speed transistors packed by the millions on silicon chips. It also is used in the manufacture of optoelectronics and high-speed magnetic storage devices.

EPLANS Engineering, Planning and ANalysis Systems. Software offered by Western Electric (now called AT&T Technologies) to help operating telephone company people run their business better.

EPOC EPOC is an operating system developed by Psion and now owned by Symbian, the joint venture between Psian, Nokia, Ericsson, Motorola, and Panasonic. It is designed for small, portable computer-telephones with wireless access to the Internet and other information services. EPOC is an alternative to Microsoft's Windows CE for smartphones, PDAs, etc. Epoxy A liquid material that solidifies upon heat curing, ultraviolet light curing, or mixing with another material. Epoxy is sometimes used for fastening fibers to other fibers or for fastening fibers to joining hardware.

EPN Expansion Port Network, which contains line and trunk ports of proprietary Avaya

EPP Enhanced Parallel Port. A new hardware and software innovation (and now a standard) which allows computers so equipped to send data out their parallel port at twice the speed of older parallel ports, i.e. those that came on the original IBM PC. The EPP conforms to the EPP standard developed by the IEEE (Institute of Electrical and Electronics Engineers) 1284 standards committee. The EPP specification transforms a parallel port into an expansion bus that theoretically can handle up to 64 disk drives, tape drives, CD-ROM drives, and other mass-storage devices. EPPs are rapidly gaining acceptance as inexpensive means to connect portable drives to notebook computers. There's no difference in the shape of the ardinary, 25-pin D-connector plug/connector or the number of conductors. The Enhanced Parallel Port (EPP) was developed by Intel Corp., Xircom Inc., Zenith, and other companies that planned to exploit two-way communications to external devices. Many laptops built since mid-1991 have EPP ports. See also ECP.

EPROM Erasable Programmable Read Only Memory. A read only memory device which can be erased and reprogrammed. Typically, it is programmed electronically, but it is erased electromagnetically with ultraviolet light. EPROMS are typically returned to the vendor or factory for reprogramming. An EPROM on a graphics card might contain the default or ROM character set. EPROM chips normally contain UV-permeable quartz win-

dows exposing the chips' internals. See also ROM and EEPROM.

EPS An extension of the PostScript graphics file format developed by Adobe Systems. EPS lets PostScript graphics files be incorporated into other documents. FrontPage supports

importing EPS files.

EPSCS (Pronounced Ep-Sis.) Enhanced Private Switched Communications Service. An AT&T offering for large businesses with offices scattered all over the country. This service allows such businesses to rent space on AT&T electronic switches and join that switching capacity to leased lines. EPSCS customers get a network control center in their offices which gives them information on the continuing operation of their network and allows them some limited options for changing their services.

**EPSN** Enhanced Private Switched Network.

EQ See Equalization, Equalizer. Equal Access All long distance carriers must be accessible by dialing 1 — and not a string of long dialing codes. This is laid down in Judge Green's Modified Final Judgment (MFJ), which spelled out the terms of the Divestiture of the Bell Operating phone Companies (BOCs) from their parent, AT&T. Under the terms of this Divestiture, all long distance common carriers must have Equal Access for their long distance caller customers. City by city telephone subscribers are being asked to choose their primary carrier who they will reach by dialing 1 before their long distance number. All other carriers (including AT&T, if not chosen as primary) can be reached by dialing a five digit code (10XXX), thus providing Equal Access for all carriers. Not all long distance companies will opt for full equal access since this involves considerable expense to the local phone companies. See also Feature Group A, B, C and D.

Equal Access End Office A central office capable of providing equal

access. See also EQUAL ACCESS Equal Cost Multipath Routing See ECMP.

Equal Gain Combiner A diversity combiner in which the signals on each channel are added together. The channel gains are all equal and can be made to vary equally so that the resultant signal is approximately constant.

Equalizer A device inserted in a transmission line or amplifier circuit to improve its frequency response. An equalizer adds loss or delay to specific frequencies to produce a flat frequency response. The signal may then be amplified to restore its original form.

Equalization The process of reducing distortion over transmission paths by put ting in compensating devices. The telephone network is equalized by the spacing and oper-

